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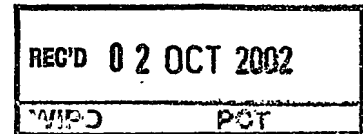
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Application form P.1, provisional specification and drawing of
South African Patent Application No. 2002/4411 as originally filed
in the Republic of South Africa on 22 April 2002 in the name of
MICHAEL VON SEIDEL for an invention entitled: "A METHOD
AND SPOOL FOR SHORTENING ELONGATE FLEXIBLE TENSION
MEMBERS".

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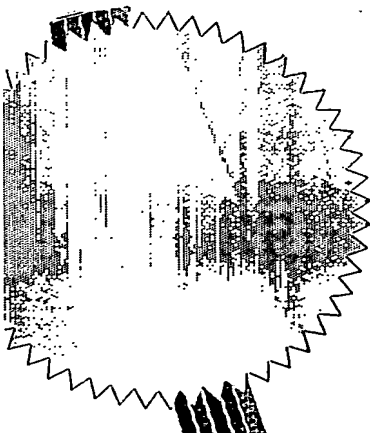
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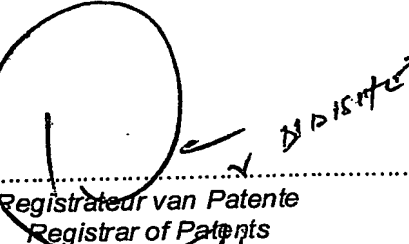
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dag van
day of

September 2002




Registrateur van Patente
Registrar of Patents

FORM P1

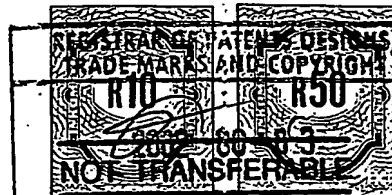
REPUBLIC OF SOUTH AFRICA

PATENTS ACT, 1978

APPLICATION FOR A PATENT AND ACKNOWLEDGEMENT OF RECEIPT

(Section 30(1) - Regulation 39)

The grant of a Patent is hereby requested by the undermentioned applicant(s)
on the present application filed in duplicate



21	01	Official Application No. 2002/4411	22	Lodging Date 2002-06-03	47	REGISTRATEUR VAN PATENTE, MODELLE, APPLICASIE EN RECHT VAN OUTHOERREG P0067A
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71 Full name(s) of applicant(s)
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Address(es) of applicant(s)

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WESTERN CAPE PROVINCE, 7130 SOUTH AFRICA

54 Title of invention
A METHOD AND SPOOL FOR SHORTENING AND OPTIONALLY TENSIONING
ELONGATE TENSION MEMBERS

The applicant claims priority as set out in the accompanying form P2

The earliest priority is

This application is for a Patent of Addition to Patent (Application) No.

This application is a fresh application in terms of S 37 and based on Application No.

21	01	
21	01	

This application is accompanied by:-

- | | | | | |
|-------------------------------------|-----|---|-----|--------|
| <input checked="" type="checkbox"/> | 1a | A single copy of a provisional specification of | 7 | pages |
| <input type="checkbox"/> | 1b | Two copies of a complete specification of | | pages |
| <input type="checkbox"/> | 2a | Informal drawings of | Nil | sheets |
| <input checked="" type="checkbox"/> | 2b | Formal drawings of | 1 | sheets |
| <input type="checkbox"/> | 3 | Publication particulars and abstract (form P8 in duplicate) | | |
| <input type="checkbox"/> | 4 | A copy of Figure of the drawings for the abstract | | |
| <input type="checkbox"/> | 5 | Assignment of invention (from the inventor(s)) or other evidence of title | | |
| <input type="checkbox"/> | 6 | Certified priority documents (documents) | | |
| <input type="checkbox"/> | 7 | Translation of priority documents (documents) | | |
| <input type="checkbox"/> | 8 | Assignment of priority rights | | |
| <input type="checkbox"/> | 9 | A copy of form P2 and the specification of S.A. Patent Application No. | | |
| <input checked="" type="checkbox"/> | 10 | A declaration and power of attorney on form P3 | | |
| <input type="checkbox"/> | 11 | Request for ante-dating on form P4 | | |
| <input type="checkbox"/> | 12 | Request for classification on form P9 | | |
| <input type="checkbox"/> | 13a | Request for delay of acceptance on form P4 | | |
| <input type="checkbox"/> | 13b | | | |

21	01	
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Date 30th May 2002

applicant

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Official date stamp

2002-06-03

REGISTRATEUR VAN PATENTE, MODELLE,
RECHT VAN OUTHOER EN RECHT VAN
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FORM P6

REPUBLIC OF SOUTH AFRICA
PATENTS ACT, 1978
PROVISIONAL SPECIFICATION
Section 30 (1) — Regulation 27

21 01

Official application No.

2002/4411

22

Lodging date

2002-06-03

71

Full name(s) of applicant(s)

VON SEIDEL, Michael

72

Full name(s) of inventor(s)

VON SEIDEL, Michael

54

Title of invention

A METHOD AND SPOOL FOR SHORTENING AND OPTIONALLY TENSIONING
ELONGATE TENSION MEMBERS

**A METHOD AND SPOOL FOR SHORTENING AND OPTIONALLY
TENSIONING ELONGATE TENSION MEMBERS**

5

FIELD OF THE INVENTION

This invention relates to a method and spool for shortening and optionally
tensioning elongate tension members such as, without restriction, guy ropes,
10 clothes lines and strands of fence wires. More particularly, the invention
relates to an extended application of the principles set out in my co-pending
South African provisional patent application number 2002/3149 dated 22
April 2002 in which there is described, predominantly, the shortening of wires
or cords used for suspending pictures in order to adjust the height at which
15 they hang relative to a suspension nail or hook.

Still more particularly, this patent application is intended to be cognated with
my said earlier patent application and, this being so, the entire content of that
application is included herein by reference.

20

BACKGROUND TO THE INVENTION

In my said earlier patent application I describe with reference to Figure 18, an
embodiment of the invention in which the handle is formed into a crank and
25 the spool is substantially larger than in the application to wires and cords
suspending pictures, the spool in this embodiment of the invention typically...
being made of metal rod.

OBJECT OF THE INVENTION

30

It is an object of the present invention to provide variations of the
embodiment of the invention described with reference to Figure 18 of my

earlier application that are particularly appropriate to the taking up of slack in, and optionally the tensioning of, such items as guy ropes used to stabilize upstanding poles, tents and other such structures; clothes lines; and even strands of fence wires.

5

SUMMARY OF THE INVENTION

10 In accordance with this invention there is provided a spool for shortening and optionally tensioning an elongate flexible or deformable tension member, the spool comprising an elongate shank having associated with each end thereof a transverse retainer formation adapted operatively to prevent unravelling from the shank of a flexible tension member passing around the elongate shank with the axis of the shank extending in the same general direction as the elongate tension member; a keeper formation for cooperation with an
15 elongate flexible tension member to enable it to be wound onto the shank by rotation thereof; and engagement means for cooperation with a separate manually operable tool for applying a rotational force to the spool by cooperation with the engagement means, and wherein the engagement means includes means for holding the spool and a cooperant part of the
20 manually operable tool in substantial axial alignment during cooperative use of the tool on the spool.

Further features of the invention provide for the retainer formation at one end, hereinafter referred to as the free end, of the spool to define also said keeper
25 means; for the opposite end, hereinafter referred to as the driven end, of the spool to have an axially extending axle for cooperation with a bore or socket in a cooperant part of said manually operable tool in order to align said part and the spool approximately axially during cooperant use thereof; for said retainer formation at the driven end of the spool to cooperate with the free
30 end of the bore in said cooperant part of the manually operable tool, and in particular, for the retainer formation to be a radially extending formation a part of which is operatively received in a notch in the free end of the said

cooperant part of the manually operable tool; and for the manually operable tool to be formed as a crank configured to achieve a required mechanical advantage.

- 5 In order that the above and other features of the invention may be more fully understood different embodiments thereof will now be described with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

10

In the drawings:-

Figure 19 is an elevation of one form of spool releasably engaged by a manually operable tool for effecting rotation thereof;

15

Figure 20 is an elevation of a variation of the spool illustrated in Figure 19 in which two alternative stop positions are provided by diametrically opposed retainer formations at the driven end of the spool;

20

Figure 21 is an isometric view of a still further variation of spool having four angularly offset retainer formations at driven end of the spool; and,

25

Figure 22 is an isometric view of a still further alternative spool illustrating an alternative tool for cooperation therewith.

DETAILED DESCRIPTION WITH REFERENCE TO THE DRAWINGS

30

In the embodiment of the invention illustrated in Figure 19 the free end (40) of the shank (41), being formed of metal rod, is bent to the configuration described with reference to Figure 6 of my said earlier patent application and

indicated by numeral (15) in said Figure 18 to form a transverse U-shaped formation defining a combination retainer formation and keeper formation.

The driven end is bent radially outwards and again radially inwards to form a
5 radially extending narrow U-shaped retainer formation (42) with the free end
of the rod terminating in an axle portion (43) that defines part of said
engagement means and that is axially aligned with the shank of the spool.
The retainer serves also as part of the engagement means as will be
apparent from what follows.

10

A manually operable tool, generally indicated by numeral (44), is adapted to
cooperate with the spool described above by receiving the axle portion (43)
in a tubular shaft (45) that has a crank (46) at its one end and, at its other
end, a radially offset torque applicator (47) for cooperation with the retainer
15 formation (42) when the axle is received within the bore of the tubular shaft.
The torque applicator can simply be a bifurcated member radially offset from
the tubular shaft whereby the retainer formation can be held captive whilst
the spool is rotated about its own axis with the application of a suitable
amount of torque. A ball catch (48), for example, can be provided on the tool
20 to releasably hold the tool in proper cooperative association with the spool
during use.

In use, with the tool and spool attached, the spool can be rendered functional
on an elongate tension member such as a guy rope, clothes line or even a
25 strand of fence wire, simply by engaging the U-shaped formation with the
elongate tension member and rotating the spool by means of the tool in the
manner described in my said earlier patent application. The tension member
can be wound onto the spool to any extent in order to take up any slack and
apply a required tension to the member and the configuration of the crank
30 can be chosen to provide the required mechanical advantage. As will be
apparent from my earlier patent application, the inclination of the spool axis
to the elongate tension member can be varied and controlled to achieve the

required results, for example, to appreciably shorten the length of the tension member the axis of the spool can be orientated in a more transverse direction initially followed by a less transverse orientation towards the stage at which the retainer formation is to be engaged with the tension member.

5 Once the retainer formation (42) at the driven end of the spool has been engaged with the tension member with the spool axis extending in the same general direction as the tension member, the tool can be disengaged from the spool.

10 As more fully set out in my said earlier patent application, the degree of shortening per revolution of the spool can be rather little due to the fact that the elongate tension member may be manipulated to assume, at least insofar as the last portion of tension member wound onto it is concerned, a spiral configuration that shortens the tension member far less than a full revolution
15 with the spool axis approaching right angles to the elongate tension member. As a result it may well be that only one radially extending retainer formation is required.

However, in the event that two such retainer formations are required in order
20 that the spool can be arrested in any selected position 180 degrees angularly offset from the previous position, then the configuration illustrated in Figure 20 could be employed. In this case the rod from which the spool is bent follows a second diametrically opposite U-shaped path to thereby form two diametrically opposite retainer formations (49). Apart from this the
25 embodiment of the invention illustrated in Figure 20 is the same as that illustrated in Figure 19.

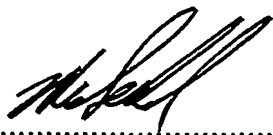
In the event that it is desired to arrest the rotation of the spool in selected angular positions 90 degrees offset relative to each other the arrangement
30 illustrated in Figure 21 could be employed in which four equally angularly offset radially extending rods (50) define retainer formations at the driven end of the spool.

Figure 22 illustrates a further embodiment of the invention in which the retainer formation (51) at the driven end of the spool (52) is simply welded onto the rod from which the spool is formed. In this case the tool (53) for cooperation with the spool has a crank (54) with a tubular socket (55) adapted to receive the free end (56) of the spool with the free end of the socket having a notch (57) for cooperation with the retainer formation (51) for enabling torque to be applied to the spool.

- 10 It will be understood that numerous variations may be made to the embodiments of the invention described above without departing from the scope hereof.

Dated this 30th day of May 2002

15



.....
applicant

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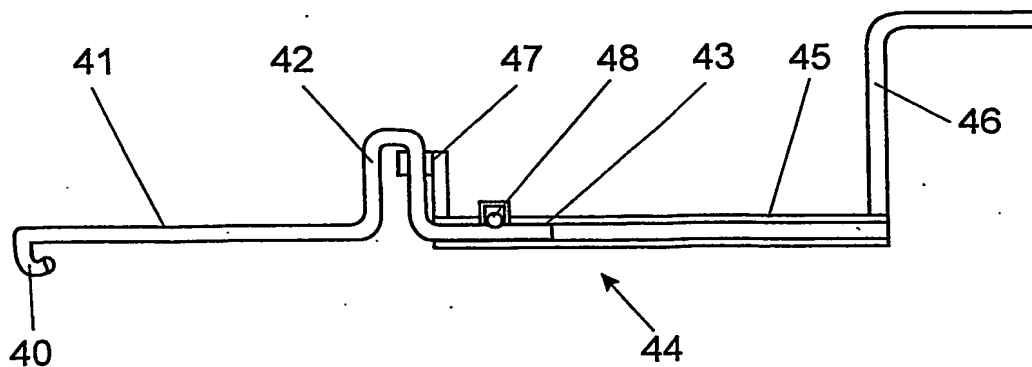


Figure 19

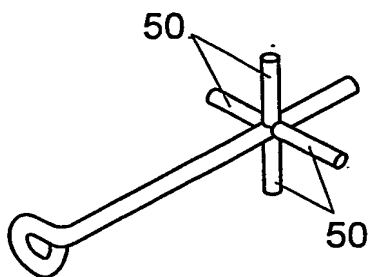


Figure 21

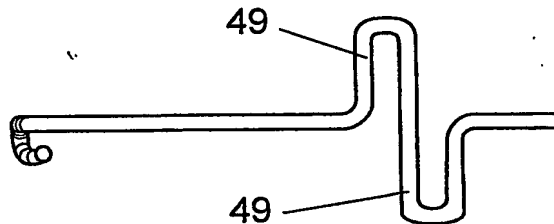


Figure 20

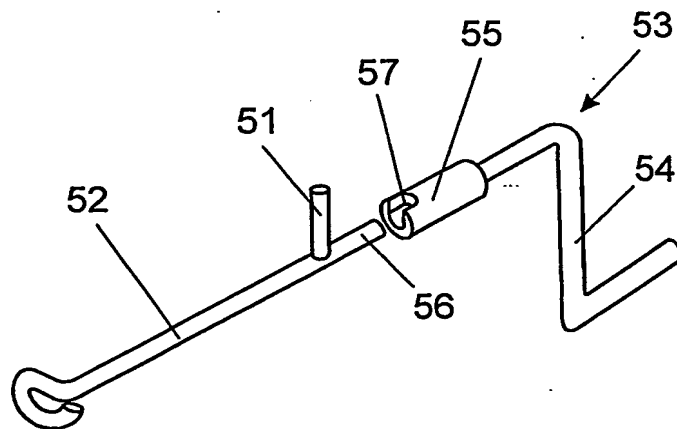


Figure 22

[Signature]
applicant

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